

# Modernization of meat inspection

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## Abstract

Current pig meat inspection still has significant value in detecting and controlling hazards related to animal welfare, animal health and meat quality, but public health-relevant hazards detected largely include those that are transmitted to humans primarily via routes other than eating pork or lack evidence of causing human disease via pork consumption. On the other hand, the main pork safety hazards presently causing the majority of human foodborne illness (e.g. enteric pathogens *Salmonella*, *Campylobacter*, *Yersinia*), or causing serious concerns (e.g. protozoan parasite *Toxoplasma gondii*) do not cause any lesions observable by the current meat inspection. Furthermore, manual meat inspection techniques mediate cross-contamination with microbial pathogens. The enteric bacterial pathogens are faecally excreted by asymptomatic pigs and cross-contaminate other pigs, the abattoir environment and carcass meat; therefore, they are largely a process hygiene problem. When considering how to make meat inspection truly risk-based and target the most relevant hazards, firstly, the hazards need to be identified and, secondly, they need to be risk-ranked. To control the most relevant pork-safety hazards, the risk-based approach would logically include differentiation between, and risk ranking of, both incoming batches of pigs (based on food chain information, epidemiological intelligence) and abattoirs (process hygiene assessment, performance). For both, appropriate targets/criteria would be needed. The control system for those hazards could include balancing between risk categories of the pig batches and risk categories of the abattoirs conducting slaughter, as well as process- and technology-based controls for higher-risk situations (e.g. surface decontamination/freezing/cooking treatments) where achieving the final targets is uncertain otherwise. In terms of the underlining rationale/philosophy and its nature, such a system would represent more a pork safety assurance rather than meat inspection.